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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,647	09/17/2003	Jindrich Houzvicka	H0610.0351/P351	3795
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			11/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/663,647

Applicant(s)

HOUZVICKA ET AL.

Examiner

Randy Boyer

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 12 September 2007.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Examiner acknowledges response filed 12 September 2007 containing amendments to the claims, remarks, and Information Disclosure Statement.
2. Claims 1-5 are pending.
3. Examiner acknowledges that Applicant's amendment to claim 4 is sufficient to overcome the previous objection.
4. Examiner acknowledges that Applicant's amendments to claims 3 and 5 are sufficient to overcome the previous rejection under 35 U.S.C. 112, second paragraph. Likewise, the previous rejection of claim 4 under 35 U.S.C. 112, second paragraph is withdrawn.
5. The previous rejections of claims 1-5 under 35 U.S.C. 102(b) and/or 35 U.S.C. 103(a) are maintained. The rejections follow.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office Action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-3 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Hollstein (US 4956519).

8. With respect to claim 1, Hollstein discloses a process for the production of high-octane gasoline from a hydrocarbon feed stream with C₄₊ hydrocarbons cuts (see Hollstein, Abstract; column 3, lines 67-68; and column 4, lines 1-7) comprising contacting the feed under isomerization conditions with a catalyst composition comprising mixed aluminum and zirconium oxides modified with tungsten oxyanion and hydrogenation/dehydrogenation component of a Group VIII metal (see Hollstein, Abstract; column 2, lines 50-68; column 3, lines 1-11, 28-31, and 67-68; and column 4, lines 1-29).

9. With respect to claim 2, Hollstein discloses wherein the hydrocarbon feed is heptane (see Hollstein, column 3, lines 67-68; and column 4, lines 1-5).

10. With respect to claim 3, Hollstein discloses wherein the isomerization conditions comprise presence of hydrogen (see Hollstein, column 4, lines 21-23) with a hydrogen to hydrocarbon ratio between 0.1 to 5 (see Hollstein, column 4, lines 23-25), a temperature range from 15°C to 300°C, a total pressure of between 1 and 40 bar (see Hollstein, column 4, lines 8-12) and a liquid space velocity LHSV of between 0.1 to 30 h⁻¹ (see Hollstein, Table I).

11. With respect to claim 5, Hollstein discloses wherein the Group VIII metal is platinum and/or palladium in an amount less than 5% (see Hollstein, column 2, lines 58-63; and column 3, lines 8-11).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

15. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hollstein (US 4956519).

16. With respect to claim 2, Hollstein discloses a process for the production of high-octane gasoline from a hydrocarbon feed stream with C₄+ hydrocarbons cuts (see Hollstein, Abstract; column 3, lines 67-68; and column 4, lines 1-7) comprising contacting the feed under isomerization conditions with a catalyst composition comprising mixed aluminum and zirconium oxides modified with tungsten oxyanion and hydrogenation/dehydrogenation component of a Group VIII metal (see Hollstein, Abstract; column 2, lines 50-68; column 3, lines 1-11, 28-31, and 67-68; and column 4, lines 1-29).

Hollstein does not disclose wherein the hydrocarbon feed contains at least 20 wt% of C₇+ hydrocarbons.

However, Hollstein discloses wherein the hydrocarbon feed is heptane (see Hollstein, column 3, lines 67-68; and column 4, lines 1-2).

Therefore, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to provide a feed containing at least 20 wt% of C₇+ hydrocarbons.

17. With respect to claim 4, Hollstein discloses wherein the catalyst comprises a major amount of Group III and Group IV metal oxides (e.g. aluminum oxide and zirconia), with lesser amounts of a Group VI oxide (e.g. tungsten oxide) and Group VIII metal (e.g. platinum and/or palladium) (see Hollstein, column 2, lines 50-68; column 3, lines 1-31; and Tables 1 and 2).

Response to Arguments

18. Applicant's arguments filed 12 September 2007 have been fully considered but they are not persuasive.

19. Examiner understands Applicant's principal arguments to be:

- I. Hollstein does not disclose a catalyst composition consisting of aluminum oxide and zirconium oxide.
- II. Hollstein discloses only the use of a sulfated catalyst composition containing Ru, Fe, or Mn on zirconium oxide.
- III. Hollstein does not disclose wherein the catalyst composition comprises 10-40 wt% aluminum oxide as recited by Applicant's claim 4.

20. With respect to Applicant's first argument, Hollstein clearly discloses wherein *mixtures* of Group III (e.g. aluminum) and Group IV (e.g. zirconium) metal oxides or hydroxides may be used (see Hollstein, column 2, lines 64-68; and column 3, lines 1-2 and 20-31).

21. With respect to Applicant's second argument, Examiner notes that Hollstein's Examples use a catalyst composition containing Ru, Fe, and/or Mn. However, Hollstein is not specifically limited to the exact catalyst compositions disclosed in the Examples. In this regard, Examiner notes that Hollstein clearly discloses wherein the Group III or Group IV element may be aluminum or zirconium, and furthermore wherein these can be used as "mixtures" of the metal oxide or hydroxide (see Hollstein, column 2, lines 64-

68; and column 3, lines 1-2 and 28-31). In addition, Hollstein clearly discloses wherein the Group VI metal may be tungsten (see Hollstein, column 3, lines 3-7).

22. With respect to Applicant's third argument, Examiner understands Hollstein's invention to preferably use 85 wt% or greater of oxide or hydroxide of metals from a first class of elements consisting of Group III or Group IV metals (see Hollstein, column 2, lines 58-63). However, Hollstein also discloses wherein "mixtures" of the Group III and Group IV metal oxides or hydroxides may be used (see Hollstein, column 3, lines 28-31). Thus, in the case where such mixtures of Group III and Group IV metals are used, it is entirely consistent with the disclosure of Hollstein that aluminum oxide in an amount 10-40 wt% may be used (e.g. with the remaining 45-75 wt% being zirconium oxide). In this regard, Examiner notes that differences in concentration will generally not support the patentability of subject matter encompassed by the prior art unless there is evidence to indicate that such concentration is critical. See MPEP 2144.05(II)(A) (citing In re Aller, 220 F.2d 454 (CCPA 1955)).

Conclusion

23. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

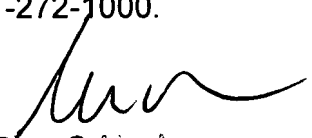
shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randy Boyer whose telephone number is (571) 272-7113. The examiner can normally be reached Monday through Friday from 10:00 A.M. to 7:00 P.M. (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn A. Caldarola, can be reached at (571) 272-1444. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RPB


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